

**TRANSLATION STRATEGIES OF EFL STUDENT TEACHERS:
A THINK ALOUD PROTOCOL-BASED CASE STUDY**

BY

MAHSOUB ABDUL-SADEQ ALY

Faculty of Education – Benha – Egypt

ABSTRACT

The main concern of the present study is to investigate the strategies followed by the EFL students in the translation process. This problem has been dealt with through answering the following two questions:

- 1-** What are the strategies followed by the EFL student teachers in the translation process?
- 2-** What are the educational implications for enhancing the teaching of translation at faculties of education?

Since it is a think aloud protocol-based case study, the final sample of the present research consisted of 12 students in three different years (first, third and fourth) in the English language section at Benha Faculty of Education.

A translation test was developed and face-validated by a jury of three experts in the field. It consisted of ten Arabic sentences to be translated from Arabic into English and two English paragraphs to be translated into Arabic. The test was administered, in the university year 2002-2003, to 12 students. The test subjects produced the translations on their own and alone, one by one separately, as they preferred. Before they started the translations, one-hour meeting was held for each year to raise the students' awareness as well as to train them to think aloud while they translate. They were also asked to verbalize everything that came into their minds while performing the translation task. They were told that the objective of the investigation was to find out aspects of mental translation procedures.

After these instructions, they were given the test sheet and a cassette recorder. Two dictionaries, a monolingual and a bilingual, were intentionally brought to the test room, for those who need to use them. During the test, they proceeded in the way s/he normally liked. There was no limited time for completing the test. After the translations had been recorded, they were transcribed for subsequent qualitative and quantitative analysis which revealed the strategies followed by the sample to solve the problems they faced when they translated into the two languages. Finally, Some educational implications and recommendations for translation instruction were suggested.

- INTRODUCTION:

In the last two decades, the emphasis of the Egyptian researchers in the field of translation teaching and learning was on various issues such as: the product, the development of teaching techniques, design of courses and evaluation of examinations. For example, *Aly* (1986) analyzed the errors made in written translation by Egyptian prospective teachers of English. Again, *Aly* (1990) designed a translation course for the students of English at faculties of education. *El-Sheikh* (1987) suggested a communicative approach to the teaching of translation that might help the students to develop their skills systematically. *Kamel* (1990:55) developed a technique for teaching learners how to help themselves by effective problem solving. *El-Sheikh* (1990), again, carried out a study on the setting of translation examinations as well as the evaluation of students' performance on these examinations. *El-Shafie* (1992) investigated the effectiveness of some techniques for teaching translation at faculties of education. *Aly* (1995) studied the testing of translation at faculties of education where the author suggested a list of criteria and evaluated some translation examinations in three faculties of education: Benha, Mansoura and Shibeen-El-Qoum. *Al-Maghraby* (1995:269) developed guidelines for translation course that was based mainly on the university students' needs and leads to a real communicative use of the target language. Very recently, *Gabr* (2002) investigated the attitudes of the undergraduate students towards the translation programs. He criticized teaching translation in the faculties of arts and education in Egyptian national universities. *El-Sakran* (2002) investigated the problem of personal gender in the translation from English into Arabic. Finally, *Solhy* (2002) evaluated the current state of teaching translation in the Arab universities and suggested a comprehensive systematic program of a translation course design. *Van Leuven-Zwart* (1991:35) justifies this trend by saying that "the study of the *product* of translation is prior to the study of the *process* and the function of translation".

On the contrary of the Egyptian researchers, it was found out that there were some foreign studies which tackled the *process* of translation (for more details, see the review of literature, section 2 and 3). For example, *Lorscher* (1991:39-41, 54) collected 52 translations performed orally on tape by 48 subjects in the first and the second years. They were told to verbalize everything that came into their minds while performing the task. After the translations and reproductions had been recorded on cassette, they were transcribed in order to make them accessible for the subsequent analysis. The study reported some results such as: "three types of translational problems were found and analyzed: lexical, syntactic and lexico-

syntactic problems” (p. 202), “one and the same problem can be successfully addressed by different strategies”, and “one and the same strategy can be used to solve different problems”(p. 280) (For more details, see pp. 202-217 for the analysis of the types of problems, and pp. 217-264 for the translation strategies).

Based on the present article author’s professional experience in Benha Faculty of Education, where he has been teaching the translation course for eleven years, his main concern, like most of the translation instructors, has been on the *product* of the students. Besides, there was no research attempt for studying the translation *process* of the Egyptian students in the faculties of education. Consequently, the present study tries to identify the strategies followed by EFL student teachers in the translation process from Arabic into English and vice versa in order to bridge this gap in the literature, which, in turn, will hopefully lead to more understanding of the learning and teaching of translation.

- **THE STUDY PROBLEM:**

The main concern of the present study is to investigate the strategies followed by the EFL students in the translation process. This problem will be tackled through answering the following two questions:

- 3- What are the strategies followed by the EFL student teachers in the translation process?**
- 4- What are the educational implications for enhancing the teaching of translation at faculties of education?**

- **DEFINITIONS OF TERMS:**

1. **PRODUCT VERSUS PROCESS:**

- Product, according to *Munday* (2001:4-5), is the text that has been translated, while process is the act of producing the translation.

2. **TRANSLATION STRATEGY:**

- "*Strategies*" is a term which has been used to refer to both conscious and unconscious procedures. (*Seguinot* 1991:82)

- A translation strategy is a potentially conscious procedure for the solution of a problem which an individual is faced with when translating a text segment from one language into another (*Lorscher* 1991:67). In other words, translation strategies are procedures which the subjects employ in order to solve the translation problems they realize (pp. 92, 96). Accordingly, translation strategies have their starting-point in the realization of a problem by a subject, and their termination in a (possibly preliminary) solution to the problem or in the subject's realization of the insolubility of the problem at the given point in time. (p. 96)

3. THINK-ALOUD PROTOCOL:

- According to *Van Someren et. al.*(1994), it is a very direct method to gain insight in the knowledge of human problem-solving. It is generally used to know more about cognitive processes (pp. 1-2). The protocol shows clearly how the students solve the problem step by step (p. 6). This method consists of (a) collecting think aloud protocols by instructing people to solve one or more problems while saying "what goes through their head", stating directly what they think. (b) analyzing the protocols to obtain a model of the cognitive processes that take place during a problem solving (pp. 8, 25). *Toury* (1991:95) explains that subjects who are faced with the task of producing a translation are asked to say aloud whatever comes to their minds while they are working on it. The verbalizations are recorded, the recorder protocols transcribed, and the running transcripts are then submitted to analysis". (For more details on "think-aloud protocols", see section: review of literature).

4) CASE STUDY:

- *Cobuild* defines it as "an account that gives detailed information about a person, group, or thing and their development over a period of time". (*Guceri and Akin* 1998:18)

- REVIEW OF LITERATURE AND RELATED STUDIES:

- FIRST: THINK-ALOUD PROTOCOL:

Think-aloud protocol (TAP) is a technique in which students verbalize their thoughts as they thus bring into the open the strategies they are using to understand a text (or to translate a text). It can be used as both an instructional tool and as an assessment of students at almost any grade level (*Coiro* 2001: 1-4). It has been used in the field of language education, for studying reading processes (*Gordon and Heins* 1995, *McApline* 2000, *and Vislocky* 2000), for spelling (*Fresch* 2001) and for vocabulary instruction (*Soria* 2001:77).

Steinkuehler and Derry (2001) provide some important advice for using this technique as follows:

1. Don't engage in social interaction while the student is thinking aloud. If the student stops verbalizing, say something to the effect of "keep talking". Don't inject yourself into the process with statements such as "tell me what you are thinking".

2. Don't panic when the verbalizations students provide lack coherence. Concurrent verbalizations do not detail how a solution was generalized per se.
3. Don't use think-aloud methods with tasks that require visual imagery.
4. Provide each participant ample practice thinking aloud.
5. Make sure the task has a clear focus and that the participants stay focused on it and not the verbalization

Draper (2002:1-4) stated the advantages of TAP. According to him, It is a rapid, high-quality, qualitative user feedback as compared with the questionnaires. It also has high degree of flexibility; the experiment may easily be steered by the observer. Besides, the subject can feel relaxed. It is useful because sessions can be recorded for later analysis.

- SECOND: TRANSLATION PROCESS:

The review of the foreign literature revealed that there has been much interest in the translation process. Many studies in Europe and some in America and England have been conducted in this respect, such as: *Tirkkonen-Condit* 1987 (Finland), *Wilss* 1990 (Germany), *Bantas* 1991 (Romania), *Daro* 1992 (Italy), *Lorscher* 1992 (Germany), *Matrat* 1992 (United States), *De Schaetzen* 1993 (Belguim), *Shreve et al.* 1993 (United States), *Nord* 1994 (Denmark), *Bentinck* 1995 (United States), Honig 1995 (Germany), Kunzli and Tissot 1995 (Switzerland), *Fraser* 1996 (United Kingdom), *Culic* 1997 (Croatia), *Reinke* 1997 (Germany), *Rey and Tricas* 1998 (Spain), *Hansen* 1999 (Denmark), *Rehail* 1999 (Bulgaria), *Pierini* 2000 (Italy), and *Seguinot* 2000 (Netherlands).

- THIRD: THINK ALOUD PROTOCOL AND TRANSLATION PROCESS:

In recent years, new research methodologies have been used in an attempt to throw light on the translation process; one of them is think-aloud protocols (TAPs) (*Bernardini 2000 and Kussmaul et al. 2000*). Since translation is a complex cognitive activity and a problem-solving process, a few scholars have tried to investigate it by means of TAPs as in the following section.

Gerloff (1989) conducted a study using think-aloud protocols to investigate the translation processes of university students (n=4), bilingual speakers (n=4) and professional translators (n=4). They were given a French magazine article and were asked

to think out loud as they translated it into English. They used dictionaries and a thesaurus. The think-aloud protocols were audio- and video-tape recorded and transcribed verbatim. They were then coded for problem solving strategies. The data were analyzed to determine differences in processing among the groups.

Al-Besbasi (1992) carried out a study to investigate some aspects of the translation process, including observations of the use of dictionaries in translation. The corpus of data came from the concurrent verbal reports produced by eleven subjects taking part in a translation exercise in English and Arabic. The subjects' verbal reports provided access to their cognitive processes, and the findings of the study were based on these verbalized processes.

Matrat (1992) evaluated two research methodologies--think-aloud and joint translating-in order to determine which one is the most appropriate for uncovering the translation process and, therefore, to contribute to a theory of translating. It discussed the results from a think-aloud and joint translating experiment with novice, advanced and expert translators. It was found out that the think-aloud data provided limited evidence of the translators' strategies, except for novices, whereas the joint translating data uncovered deeper processing at all levels and is easier to interpret. It analyzed the translation process and showed that there were important differences between novices, advanced and expert translators.

Rydning (2000) asked six students of French at master level to translate a French text into Norwegian and at the same time verbalize their thoughts. All they did and said was audio and video-taped. The recordings were analyzed. The findings were discussed with the focus on the following aspects: degree of automation, consciousness towards text awareness, treatment of proper names and cultural references, thematic coherence and lexical cohesion.

- RESEARCH METHOD AND PROCEDURES:

- RESEARCH SAMPLE:

Since it is a think aloud protocol-based case study, the sample of the present research consisted of 14 students (12 females – 2 males) in three different years (first = 5, third = 4 and fourth = 5) in the English language section at Benha Faculty of Education, Zagazig University. Two students (one from the fourth year and the other from the first) were excluded because they did not complete the test or because the recordings were technically bad. The final sample consisted of 12 students, four of each year. Students

from three different academic years were chosen in order to compare their translation strategies. All sample students participated voluntarily in the study. The following table provides more information:

Table (1): The Sample

No.	Name	Gender	Year
1	- El-Sayyed Ahmad	Male	first
2	- Sherihan Samy Abdul-Haq	Female	first
3	- Sarah Samy Abdul-Haq	Female	first
4	- Abdul-Khaliq Sayed Abdul-Khaliq	Male	first
5	- Rehab Aly Khamis	Female	third
6	- Fatmah Yousif Mahmoud	Female	third
7	- Sahar Salim Aly	Female	third
8	- Shaimaa Mohammad Abdalla	Female	third
9	- Shaimaa Mostafa	Female	fourth
10	- Marwah Mohammad Abdul-Aziz	Female	fourth
11	- Marwah Ezzat	Female	fourth
12	- Hanim El-Sayyed	Female	fourth

- DATA COLLECTION:

In order to answer the first question: “**What are the strategies followed by the EFL student teachers in the translation process?**”, a translation test was developed and face-validated by a jury of three experts in the field^(*). It consisted of ten Arabic sentences to be translated from Arabic into English and two English paragraphs to be translated into Arabic (See Appendix 1). The test was administered in the university year 2002-2003, to 12 students (see table 1). The test subjects produced the translations on their own and alone, one by one separately, as they preferred. Before they started the translations, one-hour meeting was held for each year to raise the students’ awareness as well as to train them to think aloud while they translate. They were also asked to verbalize everything that came into their minds while performing the translation task. They were told that the objective of the investigation was to find out aspects of mental translation procedures.

After these instructions, they were given the test sheet and a cassette recorder. Two dictionaries, a monolingual and a bilingual, were intentionally brought to the test room, for those who need to use them. During the test, they proceeded in the way s/he normally liked. There was no limited time for completing the test.

^(*) **1- Dr. Iman Abdul-Haq, Associate Professor of TEFL, FOE, Benha.**
2- Dr. Mona Za’za’, Lecturer of TEFL, FOE, Benha.
3- Dr. Taha Khedr, Lecturer at the English Department, Faculty of Arts, Benha.

After the translations had been recorded, they were transcribed for subsequent analysis as follows.

- DATA ANALYSIS

According to the think-aloud protocol, the data should be analyzed qualitatively and quantitatively. In this respect, *Lorscher* (1991: 199-200) stated that “any quantitative analysis of data must be preceded, in practice as well as logically, by a qualitative analysis. Both are essential for a comprehensive investigation of the translation process”. Accordingly, the data were analyzed as follows:

- First: Qualitative Analysis:

Both Arabic and English transcribed translations of each subject were analyzed in detail. To do this task, an analysis sheet was designed by the present article author. It focused on two main stages of the translation strategies: how the student explained or did not explain a translation problem he faced, and how he found or did not find its solution. It is presented in the following table:

TABLE (2): ANALYSIS SHEET OF THE TRANSLATION STRATEGIES

No.	Explanation	Solution	Abbreviations	Code
1	no	Right	NE + RS	☐ ☺
2	Right	Right	RE + RS	☺ ☺
3	Wrong	Right	WE + RS	☺ ☺
4	No	Wrong	NE + WS	☐ ☹
5	Wong	Wrong	WE + WS	☹ ☹
6	Right	Wrong	RE + WS	☺ ☹
7	No	No	NE + NS	☐ ☐
8	Wrong	No	WE + NS	☹ ☐
9	Right	No	RE + NS	☺ ☐
10	Dictionary	RIGHT	D + RS	📖 ✓
11	Dictionary	WRONG	D + WS	📖 ✗

One additional symbol was used as follows:

12	- No problems faced at all	✓ ✓ ✓
-----------	----------------------------	-------

**** EXAMPLES OF THE STUDENTS' THINKING ALOUD DURING TRANSLATION:**

(1) **STUDENT #9:** (4th Year - see: Table 1)

- Sentence 2:

- تواجه الأسرة المصرية مشكلات كثيرة بعضها نابع من البيئة ،

Sentence parts	strategies	Symbol & code
- الجزء الثانى فيه مشكلة: "بعضها نابع من". مش عارفة كلمة "نابع" معناها أيه.	- The student (S) realizes a translation problem.	
- هقول "came" يعنى "جت"	- S searches for a possible solution to a translation problem using intralingual translation.	RE
- translation: ... some of them came from ...	- S reaches the right solution.	RS
		☺ ☺

In this sentence, S succeeded in giving a right explanation (☺) and, in turn, a right solution (☺).

- Sentence: 3:

- ينبغى أن نوجد نوعا من التفاهم أو نصنع نوعا من الجسور المتحركة التى تصل بين مشاعر الجيل الماضى ومشاعر الجيل الحاضر.

Sentence parts	strategies	Symbols & code
- "ينبغى أن"	-S realizes a translation problem.	
على طول معروفة	- S immediately recalls a solution.	NE = □
- هى : "we should"	- S reaches a right solution.	RE = ☺
		□ ☺
- "نوجد"	- S realizes a translation problem.	
- يعنى: "نخلق ، هى Make or create.	- S searches for a possible solution to a translation problem using intralingual translation.	RE = ☺
- هنا "make" أحسن.	- S selects the best translation according to the text.	
- translation: we should make ...	- S reaches the right solution.	RS = ☺
		☺ ☺

- "التفاهم" ، كلمة "تفاهم" مش عارفة معناها	- S realizes a translation problem.	
- هجيبها من "يفهم" = understand ومنها "understanding" يعنى "فهم" وليس "تفاهم"	- S searches for a possible solution to a translation problem using intralingual translation. - He misused a right solution.	RE = ☺
- الأحسن هو : Acceptance or agreement	- S suggests two wrong different solutions.	WS = ☹ ☺ ☹
- كلمة "جسور"	- S realizes a translation problem.	
- ليس معناها "كوبرى أو "جسر" bridges ، بس دى فى المعنى المادى. لكن جسور هنا تعنى "روابط بين الجيلين الماضى والجيل الحاضر.	- S explains wrongly the possible solution.	WE = ☹
- كلمة "bridges" مش ها تنفع.	- S excludes the possible solution.	
- أفضل كلمة "links".	- S reaches a wrong solution, based on his wrong explanation.	WS = ☹ ☹ ☹

- Sentence 8:

- إن الأقطار العربية غنية بالمعادن.

Sentence parts	strategies	Symbols & code
- كلمة "معادن" مش عارفها.	-S realizes a translation problem.	
- هل هى : metals or minerals ?	- S tries to guess the right solution.	NE = □
(Silence)	- S was not able to solve the problem. Therefore, she reaches nothing.	NS = □ □□

In this sentence, S failed in giving a right or wrong explanation (□) as well as a right or wrong solution (□).

[2] STUDENT #8: (3rd Year - see: Table 1)

- Sentence 1:

- إن إحساس الصداقة أساس للتفاهم فى المنافع المشتركة.

Sentence parts	strategies	Symbols & code
----------------	------------	----------------

- كلمة "أساس" !!	-S realizes a translation problem.	
- "أساس" معناها: Base or foundation	- S gives synonymous words.	RE = ☺
- الحل: foundation	- S reaches a wrong solution.	WS = ☹
		☹ ☺
- كلمة "منافع" !!	-S realizes a translation problem.	
- معناها: Benefits or profits	- S tries to guess the right solution.	RE = ☺
- الحل هو: benefits	- S was not able to solve the problem. Therefore, she reaches nothing.	RS = ☺
		☹ ☹

- Sentence 10:

- يعرف المواطن الصالح حقوقه و واجباته.

Sentence parts	strategies	Symbols & code
- كلمة "المواطن" !!	-S realizes a translation problem.	
- معناها: Citizen or individual	- S gives synonymous words.	RE = ☺
- الحل هو : citizen	- S reaches a right solution.	RS = ☺
		☹ ☹
- كلمة "واجباته" !!	-S realizes a translation problem.	
- معناها: Duties or homework	- S gives alternative words.	RE = ☺
- الحل: duties	- S reaches a right solution.	RS = ☺
		☹ ☹
- كلمة "يعرف" !!	-S realizes a translation problem.	
- معناها: knows or recognizes	- S guesses the possible solution.	RE = ☺
(silence)	- S was not able to solve the problem. Therefore, she reaches nothing.	NS = □
		☹ □

(3) STUDENT #1: (1st Year - see: Table 1)

- إن الأقطار العربية غنية بالمعادن.

Sentence parts	strategies	Symbols & code
- " الأقطار العربية " !!	-S realizes a translation problem.	
- ترجمتها: The Arabic countries	- S reaches a wrong solution immediately and without explanation.	WS = ☹ ☐ ☹
- " غنية بـ " !!	-S realizes a translation problem.	
- معناها "يملك"	- S gives a wrong synonymous word.	WE = ☹
- الحل هو : have	- S reaches a wrong solution.	WS = ☹ ☹ ☹
- كلمة "أمعادن" !!	-S realizes a translation problem.	
- ترجمتها: minerals	- S reaches a right solution immediately.	RS = ☺ ☐ ☺

(4) STUDENT #7: (3rd Year - see: Table 1)

7- أتمنى معرفة اللغات الأجنبية حتى أسافر إلى الخارج للعمل والدراسة.

Sentence parts	strategies	Symbols & code
- كلمة "أتمنى" !!	-S realizes a translation problem.	
- معناها: Hope or wish	- S gives synonymous words.	RE = ☺
- الأفضل: wish	- S reaches a wrong solution.	WS = ☹ ☹ ☹
- كلمة "أجنبية" !!	-S realizes a translation problem.	
- معناها: Foreign or strange	- S gives synonymous words.	RE = ☺
-foreign -الحل الصحيح:	- S reaches a right solution.	RS = ☺ ☹ ☹

- FINDINGS OF THE QUALITATIVE ANALYSIS:

The qualitative analysis of the sample's translations revealed that:

1. Only two students (# 7 and 8 - both in third year) did not follow the order of the sentences. They felt free to start with ones they liked.

2. All the students (n=12), as a common and familiar procedure, read each sentence (as a whole) before starting translation.
3. All the students (n=12) read the sentence (word-by-word) during the translation.
4. All the students (n=12) carried out the intralingual translation strategy, i.e. the translation of the Arabic word into another synonymous Arabic word, for solving the translation problems.
5. Only two students, out of 12, used twice the Arabic-English or English-Arabic dictionaries which were intentionally made available in the test room.
6. Most students (n=11) read the English two paragraphs as a whole only once for comprehension before starting translation.
7. Some students (n=4) completely avoided the translation of one or more of the Arabic sentences and the English paragraphs (see Table 3).

Table (3): Avoidance Strategy Followed by Some Students

<i>Student #</i>	<i>Year</i>	<i>Sentence #</i>
5	3	4
6	3	11 + 12 (English paragraphs)
10	4	11 + 12 (English paragraphs)
12	4	1

It is surprising that the senior students (third and fourth year), not the junior ones as it is usually expected, followed the avoidance strategy. One possible reason is that the seniors are overloaded with the education and psychology courses that may lead to their low level in language in general and translation in particular. Another possible reason is that the seniors are more aware that, after graduation, they may not find teaching jobs nowadays. As a result they are frustrated while the juniors are more enthusiastic.

8. Three students translated three sentences successfully, facing no problems at all, as follows:

Table (4): The Free-Problem Sentences Translated by Three Students

<i>Student #</i>	<i>Year</i>	<i>Sentence #</i>
------------------	-------------	-------------------

1	1	11
2	1	9
5	3	10

This finding, again, confirms that the junior students have a higher linguistic competence than the senior.

- Second: Quantitative Analysis:

In addition to the qualitative analysis, quantitative one has been carried out. It focused on the types and frequency of translation problems faced by the sample. To do this, all the students' grammar and vocabulary problems, not errors, were identified and tabulated for analysis.

*** FINDINGS OF THE QUANTITATIVE ANALYSIS:**

In the following section, two tables summarize the findings:

Table (5): Types of Grammar and Vocabulary Problems

STUDENT #	YEAR	GRAMMAR PROBLEMS	VOCABULARY PROBLEMS	TOTAL
1	First	11	22	33
2	First	19	23	42
3	First	17	20	37
4	First	18	16	34
5	Third	8	20	28
6	Third	22	23	45
7	Third	27	21	48
8	Third	7	31	38
9	Fourth	7	21	28
10	Fourth	9	33	42
11	Fourth	16	28	44
12	Fourth	14	20	34
		175	278	453

This table shows that:

1. The total number of translation problems was 453.

2. The grammar problems (n=175) were less than the vocabulary ones (n= 278).
3. The sample students in the different years (first, third and fourth) faced almost the same number of translation problems. First year students faced 146 (= 32%), third year students faced 159 (= 35%) and fourth year students faced 148 (= 33%).
4. Two students (no. 5, third year and no. 9, fourth year - see Table 1) experienced the least number of translation problems (n= 28).
5. Two students from the third year (no. 6 and no. 7 - see Table 1) faced the highest number of translation problems (n= 45 and 48 respectively).

Table (6): Frequencies of Translation Problems

		Test Sentences												Total
		1	2	3	4	5	6	7	8	9	10	11	12	
Translation Problems of Each	1	3	5	6	2	3	1	1	3	1	3	0	5	33
	2	4	6	6	4	5	2	2	4	0	4	1	4	42
	3	3	8	3	3	3	2	2	2	4	2	2	3	37
	4	5	4	4	4	1	3	3	3	2	2	1	2	34
	5	3	4	5	0	1	3	2	5	1	0	2	2	28
	6	5	6	10	7	1	3	2	3	4	4	0	0	45
	7	4	7	4	7	3	3	7	3	3	1	2	4	48
	8	2	3	7	5	1	3	3	3	4	3	1	3	38
	9	2	3	2	5	2	1	1	1	1	2	2	6	28
	10	5	2	6	7	3	4	3	5	4	3	0	0	42
	11	4	4	7	5	3	2	2	4	2	1	5	5	44
	12	0	2	6	4	3	4	2	3	3	2	3	2	34
Total		40	54	66	53	29	31	30	39	29	27	19	36	453

This table shows that:

6. The Arabic sentence no. 3 (see: the column 5 in Table 6)

- ينبغي أن نوجد نوعاً من التفاهم أو نصنع نوعاً من الجسور المتحركة التي تصل بين
مشاعر الجيل الماضي ومشاعر الجيل الحاضر

was the most problematic because the sample students faced 66 problems when translating it. The possible reason is that it included three new difficult words: الجسور المتحركة and التفاهم , تُوجد .

7. The Arabic sentence no. 10 (see: the column 12 in Table 6)

- يعرف المواطن الصالح حقوقه وواجباته.

was the least problematic because the sample students faced 27 problems only when translating it. The possible reason is that it is very simple and easy, on the contrary of sentence no. 3. This indicates that the test as a

whole consisted of simple easy sentences as well as new difficult ones.

8. The second English paragraph (no. 12 - see: the column 14 in Table 6) caused more problems (n= 36) than the first English paragraph (the column 11 - number of problems = 19 - see: the column 13 in Table 6). The former dealt with the topic of “woman’s brain”. It contained some difficult English words (such as: average man, average woman, judges and ministers) they, probably, were not familiar with. The latter one was about the conditions of each stage of life. It was interesting and easy for the students to translate.

Table (7): Frequencies of Students’ Strategies for Solving Grammar Problems (All the Sample)

YEAR	FREQUENCY OF STRATEGIES												T.	%
	1	2	3	4	5	6	7	8	9	10	11	12		
First	3	19	1	33	1	0	0	1	1	2	0	0	61	36
Third	0	8	1	37	1	2	1	1	1	0	0	7	59	35
Fourth	3	17	1	14	9	2	2	0	0	0	0	2	50	29
Total	6	44	3	84	11	4	3	2	2	2	0	9	170	

This table shows that:

- 9- The most frequent strategies followed by the sample as a whole for solving the grammar problems were strategy no. 4 (no explanation + wrong solution - see: Table 2) (freq. = 84 - 49%) and strategy no. 2 (right explanation + right solution - see: Table 2) (freq. = 44 - 26%). In other words, the students, in strategy no. 4, realized grammar problems and did not provide an explanation that might lead to correct solution. In strategy no. 2, they managed to give a right explanation and, in turn, a right solution).
- 10- The least frequent strategies followed by them were strategy no. 1 (no explanation + right solution - see: Table 2) (freq. = 0) and strategies nos. 8 (wrong explanation + no solution - see: Table 2), 9 (right explanation + no solution - see: Table 2), 10 (use of dictionary + right solution - see: Table 2) (freq. = 2 for each).
- 11- By comparing the frequencies of the three academic years, it was found that the total number of strategies followed by the students for solving the grammar problems were almost the same (first year = 61 - 36%, third year = 59 - 35%, and fourth year = 50 - 29%). This may indicate that the levels of the students

in grammar are not very different although they are at different academic years. The reason behind this finding is that the students' knowledge of English grammar was, to some extent, stable since they finished their secondary schools. In other words, they have already mastered the English grammar in the pre-university stage and little more was added to their knowledge.

Table (8): FREQUENCY OF STUDENTS' STRATEGIES FOR SOLVING VOCABULARY PROBLEMS (ALL THE SAMPLE)

YEAR	FREQUENCY OF STRATEGIES												T.	%
	1	2	3	4	5	6	7	8	9	10	11	12		
First	3	10	3	51	1	2	0	0	2	3	1	2	78	28
Third	4	35	5	25	7	7	0	1	5	0	0	8	97	34
Fourth	19	31	10	15	16	11	0	1	1	0	0	4	108	38
Total	26	76	18	91	24	20	0	2	8	3	1	14	283	

This table shows that:

- 12- The most frequent strategies followed by the sample as a whole for solving the vocabulary problems were strategy no. 4 (no explanation + wrong solution - see: Table 2) (freq. = 91 - 32%) and strategy no. 2 (right explanation + right solution) (freq. = 76 - 27%). Again, these two strategies were the same followed in grammar problems (see: no. 9, below Table 7 in the previous section).
- 13- The least frequent strategies followed by them were strategy no. 7 (no explanation + no solution - see: Table 2) (freq. = 0), no. 11 (use of dictionary + wrong solution) (freq. = 1), no. 8 (wrong explanation + no solution) (freq. = 2) and no. 10 use of dictionary + right solution - see: Table 2) (freq. = 3).
- 14- By comparing the frequencies of the three academic years, it was found that the total number of strategies followed by the students for solving the vocabulary problems were different and ascending (first year = 76 - 28%, third year = 96 - 34%, and fourth year = 50 - 38%). This indicates that the students' strategies for solving the vocabulary problems, on the contrary of the grammar ones, increased gradually from the first year to the third to the fourth. In other words, the students became more lexically sensitive when they move from an academic year to the next. The reason may be the large number of

words they acquire from the linguistics and literature courses, but those words seem to be passive and, in turn, they perplex the students when attempting to use them. Another possible reason is the overload of education and psychology courses assigned for third and fourth year students.

- CONCLUSION:

From the previous qualitative and quantitative analyses, the following strategies for solving the translation problems were frequently used by the sample both in Arabic and English translations:

- First: the student reads the sentence as a whole once or twice in order to grasp its meaning.
- Second: he reads the sentence, word by word, immediately before starting the translation to recall the equivalent of each word.
- Third: he realizes a translation problem, either in grammar or in vocabulary.
- Fourth: he tries to solve the problem by applying one of these frequent sub-strategies:
 1. using intralingual translation, with explanation.
 2. recalling a right solution immediately and automatically, without explanation.
 3. suggesting a wrong explanation for a problem but reaching a right solution.
 4. suggesting no explanation and reaching a wrong solution.
 5. giving a wrong explanation and, in turn, a wrong solution.
 6. giving a right explanation but a wrong solution.
 7. avoiding the translation of one or more of the sentences.
- Fifth: he proofreads the translation for revision, modification and correction

The less frequent strategies followed by the sample were:

- Using the monolingual or bilingual dictionaries.
- Suggesting a wrong explanation but with no answer.
- Suggesting a right explanation but reaching no solution.
- Using a dictionary and reaching a right solution.
- Using a dictionary but reaching a wrong solution.
- Facing no problems at all in translating one or more sentences.

Regarding the difference between Arabic and English translation strategies, the subjects followed almost the same strategies. It was also found out that the problems in the translation into Arabic were less serious and difficult than those in the translation into English because, in the former, the subjects had to use correct English grammar and spelling but in the latter they already mastered them. In other words, the subjects did much effort, and, in turn, more mental processes in the translation into English. This conclusion agreed with *Lorscher's* study which found out that in the translations into the mother tongue slightly more lexical problems were addressed by strategies (*Lorscher* 1991:262-263). This proved true in the present study by comparing the frequencies of the subjects' strategies for solving the grammar problems for the two English paragraphs (see table 7, no. 11 and no. 12 - frequencies = 0 and 9 respectively) and those for solving the vocabulary problems for the two English paragraphs (see table 8, no. 11 and no. 12, frequencies = 1 and 14 respectively). It is clear that grammar was less problematic and strategic than vocabulary in the translations into Arabic.

- **EDUCATIONAL IMPLICATIONS AND RECOMMENDATIONS FOR TRANSLATION INSTRUCTION:**

In order to answer the second and last question of the present study: “**What are the educational implications for enhancing the teaching of translation at faculties of education?**”, the following implications and recommendations are suggested in the light of the research findings:

- 1- Translation instruction at the faculties of education should encourage the students to use frequently the dictionaries, a strategy neglected by the instructors and learners as well. This was very obvious in the present study when the students did not use the dictionary available intentionally in the test room.
- 2- Translation instruction should deal with various topics, i.e. literary, scientific, social, economic, political and religious. This procedure helps the students to have more practice in the different kinds of material and styles. It may help the students to overcome the avoidance strategy during translation tasks as revealed in the present study.
- 3- Translation instruction should focus on the development of the students' vocabulary more than of grammar, because the former is already a more problematic language component that revealed by the present study. More attention is needed to encourage and train the students to use the words they learn.

- 4- Translation instruction should tackle sentences and topics of different levels of difficulty according to the students' abilities.
- 5- Translation instruction should give the opportunity to the students to develop their translation skills according to a systematic order and sequence of materials, starting from the first year to the fourth. Teaching translation haphazardly in the faculties of education should be avoided as much as possible.
- 6- Translation instruction should focus more on practice, with very little theoretical guidelines. That is to say, much time should be spent on the students' practice in translation.
- 7- A systematic educational translation course should be used in the faculties of education, instead of the scattered materials and handouts usually collected from the newspaper, a common procedure followed at the faculties of arts and applied, in parallel, at the faculties of education.

REFERENCES

- 1- Al-Besbasi, Ibrahim Ali (1992): An empirical investigation of some cognitive processes of translation between English and Arabic with special reference to the use of dictionaries. *DAI*, 52/09, p. 3258-A.
- 2- Aly, Mahsoub Abdul-Sadeq (1986): *An analytical study of the errors made in written translation by Egyptian prospective teachers of English as a foreign language*. Unpublished M.A. Thesis, Faculty of Education, Benha.
- 3- Aly, Mahsoub Abdul-Sadeq (1990): *A suggested course in translation for the students of English language sections in faculties of education in Egypt*. Unpublished Ph. D. Thesis, Faculty of Education, Benha.
- 4- Aly, Mahsoub Abdul-Sadeq (1995): Testing Translation at Faculties of Education. Proceedings of the 14th National Symposium on English Language teaching, April 9-11, entitled: "*English Language in 2000*". Cairo: CEDLT, Ain Shams University.
- 5- Al-Maghraby, Fatma Ahmed (1995): Towards a Communicative Use of Translation in a Global age. Proceedings of the 14th National Symposium on English Language teaching, April 9-11, entitled: "*English Language in 2000*". Cairo: CEDLT, Ain Shams University.
- 6- Bantas, Andrei (1991): Aspects of the word-context relation: improving synonymic option. (*An Online Abstract no. 9205952 on MLA Database*)
- 7- Bentinck, Julie (1995): A comparison of certain discourse features in biblical Hebrew and Nyaboa and their implications for the translation process. (*An Online Abstract no. 9606418 on MLA Database*)
- 8- Bernardini, Silvia (28 April 2000): Process-oriented Translation Research: Achievements, Limits, Future Prospects. (Web Site: <http://www.ccl.umist.ac.uk/events/conference/process1.htm>).
- 9- Coiro, Julie (December 1, 2001): Using the Think-Aloud in reading Instruction. (Web Site: <http://www.suite101.com/article.cfm/1411/87120>).
- 10- Culic, Zjena (1997): The use of connectives expressing overlapping semantic relationships in the translation process. (*An Online Abstract no. 9902680 on MLA Database*)
- 11- Daro, Valeria (1992): Neuropsychological and neurolinguistic aspects of the simultaneous translation process. (*An Online Abstract no. 9207732 on MLA Database*)
- 12- De Schaetzen, Caroline (1993): Translating and the computer 12. Applying technology to the translation process. (*An Online Abstract no. 93r03614 on MLA Database*)
- 13- Draper, Steve (2002): HCI Lecture 5: Think-Aloud Protocols. (Web Site: <http://staff.psy.gla.ac.uk/~steve/HCI/cscln/trail1/Lecture5.html>).

- 14- El-Sakran, Tharwat (2002): Textual, Contextual and Extra-contextual Considerations for Gender Identification in Translation. A Paper presented at the 22nd CEDLT National Symposium on English Language Teaching in Egypt, April 22-24, entitled: "***The Specific Role of EFL for the Arab World: The Decade Ahead***". Cairo: CEDLT, Ain Shams University.
- 15- El-Shafie, Nagwa Ibrahim (1992): ***The effect of using different teaching techniques of translation on students' achievement at faculties of education***. Unpublished M.A. Thesis, Faculty of Education, Mansoura University.
- 16- El-Sheikh, Ahmed Abdel-Azeem (1987): A Register Approach to the Teaching of Translation. Proceedings of the 7th National Symposium of English Teaching in Egypt, March 24-26, entitled: "***Appropriate Methodologies***". Cairo: CEDLT, Ain Shams University.
- 17- El-Sheikh, Ahmed Abdel-Azeem (1990): Towards a Systematic Approach to Evaluation of Translation Examinations. The Proceedings of Tenth National Symposium on English Language in Egypt, March 20-22, entitled: "***Teaching English: the Decade Ahead***". Cairo: CEDLT, Ain Shams University.
- 18- Fraser, Janet (1996): The translator investigated: learning from translation process analysis. (***An Online Abstract no. 9608779 on MLA Database***)
- 19- Fresch, Mary Jo (January 2001): Using think-alouds to analyze decision making during spelling word sorts. Reading Online, vol. 4, no. 6. (Web Site: ***<http://www.readingonline.org/articles/fresch/index.html>***.)
- 20- Gabr, Moustafa (2002): Teaching translation in Egyptian national universities. Translation Journal, vol. 6, no. 1. (Web Site: ***<http://accurapid.com/journal/19edu.htm>***).
- 21- Gerloff, Pamela Ann (1989): From French to English: A look at the translation process in students, bilinguals, and professional translators. ***DAI-B***, 49/09, p. 4046.
- 22- Gordon, Robin T. and Heins, Lynne A. (1995): Handbook for reading/Language Arts Volunteers: Think Aloud. (Web Site: ***<http://www.cs.umd.edu/~goodall/sent/hbkwrt7.html>***).
- 23- Guceri, Meral and Akin, Ann Riddell (1998): Case Studies in Education. Forum, vol. 36, No. 4, p. 18. (Web Site: ***<http://exchanges.state.gov/forum/vols/vol36/no4/p18.htm>***).
- 24- Hansen, Gyde (1999): Probing the process in translation: Methods and results. (***An Online Abstract no. 1999077158 on MLA Database***)
- 25- Hatim, B. and Mason, I. (1990): ***Discourse and the Translator***. London: Longman.

- 26- Honig, Hans G. (1995): opportunity as a principle: The translation process as a neural phenomenon. (*An Online Abstract no. 9608785 on MLA Database*)
- 27- Kamel, Salwa A. (1990): Teaching Translation: A Problem-Solving Technique. The Proceedings of Tenth National Symposium on English Language in Egypt, March 20-22, entitled: "*Teaching English: the Decade Ahead*". Cairo: CEDLT, Ain Shams University.
- 28- Kunzli, Alexander and Tissot, Denise (1995): Toward exposure of the translation process: Critical use of Lorsch's model. (*An Online Abstract no. 9510725 on MLA Database*)
- 29- Kussmaul, Paul; Sprach, Fachbereich Angewandte and Kulturwissenschaft, Johannes (28 April 2000): A Cognitive Framework for Looking at Creative Mental Processes in Translation. (Web Site: <http://www.ccl.umist.ac.uk/events/conference/process1.htm>).
- 30- Lorsch, Wolfgang (1991): *Translation performance, Translation Process, and Translation Strategies: A Psycholinguistic Investigation*. Tubingen, Germany: Gunter Narr Verlag.
- 31- Lorsch, Wolfgang (1992): Investigating the translation process. (*An Online Abstract no. 9402836 on MLA Database*)
- 32- Matrat, Corinne Marie (1992): Investigating the translation process: think-aloud versus joint activity (joint translating). *DAI*, 53/06, p. 246-A.
- 33- McApline, Gwen (2000): The Online Reading Center: Think Aloud Protocols Procedures. (Web Site: <http://www.westga.edu/~kidreach/ThinkAloud.html>).
- 34- Munday, Jeremy (2001): *Introducing Translation Studies*. London: Routledge.
- 35- Nord, Christiane (1994): Translation as a process of linguistic and cultural adaptation. (*An Online Abstract no. 199412411 on MLA Database*).
- 36- Pierini, Patrizia (2000): Shifts in cohesion in the translation process. (*An Online Abstract no. 200102897 on MLA Database*)
- 37- Reinke, Uwe (1997): Integrated translation systems: Considerations of the translation process, productivity, and quality and the work situation. (*An Online Abstract no. 9802830 on MLA Database*)
- 38- Rehal, Hussein (1999): The role of mnemonic and cognitive elements in the translation process. (*An Online Abstract no. 200111 on MLA Database*)
- 39- Rey, Joelle and Tricas, Mercedes (1998): From the cognitive turn to argumentative relations in the translation process. (*An Online Abstract no. 9910631 on MLA Database*)
- 40- Rydning, Antin Fougner (Friday 28 April 2000): TAPs - A Blind Alley in Throwing Light on the translation Process? (Web Site: <http://www.ccl.umist.ac.uk/events/conference/process1.htm>).

- 41- Seguinot, Candace (1991): A Study of Student Translation Strategies. In: Tirkkonen-Condit, Sonja (ed.): *Empirical Research in Translation and Intercultural Studies*. Tübingen, Germany: Gunter Narr Verlag.
- 42- Seguinot, Candace (2000): Management issues in the translation process. (*An Online Abstract no. 2001930198 on MLA Database*)
- 43- Shreve, Gregory M.; Schaffner, Christina; Danks, Joseph H. and Griffin, Jennifer (1993): Is there a special kind of "reading" for translation? An empirical investigation of reading in the translation process. (*An Online Abstract no. 9400750 on MLA Database*)
- 44- Solhy, Antar (2002): Towards a Systematic Translation Course Design in Arab Universities. A Paper presented at the 22nd CEDLT National Symposium on English Language Teaching in Egypt, April 22-24, entitled: "*The Specific Role of EFL for the Arab World: The Decade Ahead*". Cairo: CEDLT, Ain Shams University.
- 45- Soria, Julius (2001): A Study of Ilokano Learners' Lexical inference Procedures through Think-Aloud. *Second Language Studies*, 19 (2), pp. 77-110. (Web Site: [http://www.hawaii.edu/sls/whwpesl/19\(2\)/Soria.pdf](http://www.hawaii.edu/sls/whwpesl/19(2)/Soria.pdf)).
- 46- Steinkuehler, Constance A. and Derry, Sharon J. (2001): Strategies for Assessing Learning Effectiveness. (Web Site: <http://www.alnresearch.org/HTML/Assessment/Tutorial/>).
- 47- Tirkkonen-Condit, Sonja (1987): A pilot study into an aspect of translation process. (*An Online Abstract no. 1987010297 on MLA Database*)
- 48- Toury, Gideon (1991): Experimentation in translation Studies: Achievements, prospects and Some Pitfalls. In: Tirkkonen-Condit, Sonja (ed.): *Empirical Research in Translation and Intercultural Studies*. Tübingen, Germany: Gunter Narr Verlag.
- 49- Van Leuven-Zwart, Kitty M. (1991): Translation and Translation Studies. In: Tirkkonen-Condit, Sonja (ed.): *Empirical Research in Translation and Intercultural Studies*. Tübingen, Germany: Gunter Narr Verlag.
- 50- Van Someren, Maarten W.; Barnard, Yvonne F. and Sandberg, Jacobijn A. C. (1994): *The Think Aloud Method: A Practical Guide to Modelling Cognitive Processes*. London: Harcourt Brace & Company.
- 51- Vislocky, Elaine (2002): Using a Think Aloud in the Classroom. (Web Site: <http://www.somers.k12/intranet/reading/think.html>).
- 52- Wilss, Wolfram (1990): Cognitive aspects of the translation process. (*An Online Abstract no. 9005919 on MLA Database*)

APPENDIX (1): TRANSLATION TEST



جامعة الزقازيق – فرع بنها
كلية التربية
قسم المناهج وطرق التدريس

عزيزى الطالب :

- يهدف هذا الاختبار إلى معرفة الإستراتيجيات (الخطوات والإجراءات) التى تقوم بإتباعها أثناء عملية الترجمة من اللغة الإنجليزية إلى اللغة العربية والعكس. والمطلوب منك ما يلى:
- 1- فكر بصوت عالى بخصوص أى شىء ستقوم به ، مثل سبب البدء بترجمة جملة أو فقرة دون غيرها ، اختيارك للكلمات ، تركيب الجملة ، وأى مشكلات تواجهها.
 - 2- قم بكتابة الترجمة النهائية للجملة أو الفقرة ، ثم انتقل إلى جملة أو فقرة جديدة ، وهكذا.

عزيزى الطالب:

- كن أميناً ودقيقاً فى تأدية هذا العمل لأهميته فى مجال تدريس وتعلم الترجمة.
- الاختبار غير مُحدد الوقت.
- إذا كان لديك أى تساؤلات أثناء أداء الاختبار ، لا تتردد فى طرحها فوراً على الباحث المصاحب لك.
- أداءك فى الاختبار سواء بشكل مُرضى أو غير مُرضى ليس له تأثير سلبى عليك شخصياً ، وإنما يعطى صوراً عن المشكلات التى يواجهها الطالب فى عملية الترجمة ، وبالتالي يقترح الحلول ليطبقها المعلم فى حجرة الدراسة.
- يتوجه الباحث بالشكر لكل طالب شارك فى هذا الاختبار.

الباحث

أسئلة الاختبار

- أولاً: ترجم الجمل الآتية من اللغة العربية إلى اللغة الإنجليزية:
- 1- إن إحساس الصداقة أساس للتفاهم فى المنافع المشتركة.

- 2- تواجه الأسرة المصرية مشكلات كثيرة ، بعضها نابع من البيئة المصرية ، وبعضها الآخر من الظروف التي يمر بها العالم فى الوقت الحاضر.
 - 3- ينبغي أن نوجد نوعا من التفاهم أو نصنع نوعا من الجسور المتحركة التي تصل بين مشاعر الجيل الماضى ومشاعر الجيل الحاضر.
 - 4- وقديما كان لأم زيان دار تعج بالأطفال ، وزوج مُجد طيب يعمل لرفاهيتها وسعادتها.
 - 5- يُولد ثلاثة أطفال كل ثانية فى مكان ما فى العالم.
 - 6- تمكنت من حل المشكلة دون مساعدة لأننى اعتمدت على نفسى.
 - 7- أتمنى معرفة اللغات الأجنبية حتى أسافر إلى الخارج للعمل والدراسة.
 - 8- إن الأقطار العربية غنية بالمعادن.
 - 9- زيادة الإنتاج هى المفتاح لحل كثير من مشاكلنا.
 - 10- يعرف المواطن الصالح حقوقه وواجباته.
- ثانيا: ترجم الفقرات الآتية من اللغة الإنجليزية إلى اللغة العربية:

- 1- How often one hears children wishing they were grown up, and old people wishing they were young again. Each age had its pleasures and its pains, and the happiest person is the one who enjoys what each age gives him without wasting his time in useless regrets.
- 2- What about woman's brain? Of course, in countries where girls are not given so good education as boys they know less. But in countries where there is the same education for both, it has been clearly shown that there is no difference at all between the brain of the average woman and that of the average man. There have been women judges in Turkey, women ambassadors in America, women ministers in the British government and women university professors in many countries.

END